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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/973,621      | 10/09/2001  | Dominik J. Schmidt   |                     | 6262             |

21906 7590 10/18/2005

TROP PRUNER & HU, PC  
8554 KATY FREEWAY  
SUITE 100  
HOUSTON, TX 77024

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| EXAMINER |
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DINKINS, ANTHONY

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| ART UNIT | PAPER NUMBER |
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2831

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                            |  |
|------------------------------|--------------------------------------|--------------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/973,621 | <b>Applicant(s)</b><br>SCHMIDT, DOMINIK J. |  |
|                              | <b>Examiner</b><br>Anthony Dinkins   | <b>Art Unit</b><br>2831                    |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4 and 6-20 is/are pending in the application.  
4a) Of the above claim(s) 3,5 and 7-14 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,4 and 6 is/are allowed.
- 6) ☒ Claim(s) 15-20 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 21 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                             |                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                 | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                        | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/2005</u> . | 6) <input type="checkbox"/> Other: _____                                                |

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1. The examiner acknowledges, as recommended in **M.P.E.P. § 707.04**, the applicant's submission of the amendment dated August 08, 2005.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15-20 and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Cohen (5,270,251) disclose in Figure 1 a silicon capacitor comprising a first metal portion (16) located on a substrate (12); an insulator portion (18) located on the first metal portion (16), the insulator portion (18) comprising a sandwich formed of a plurality of alternating (SiN) layers (23, 25) and at least one silicon (Si) layer (22); and a second metal portion (20) located on the insulator portion (18). Regarding claim 16, wherein the Si layer (22) comprises amorphous silicon, (col. 5, line 60). Regarding claim 17, wherein the substrate (12) is a substrate of an integrated circuit having analog portion and a digital portion, (see col. 3, lines 5-9 where it discloses that this device is used in the environment of an integrated circuit of an field insulator or active device layer of an integrated circuit wafer which is inherently know to have analog portion and a digital portion. Regarding claim 18, wherein the integrated circuit comprises a multi-mode wireless communication device (see, col. 5, lines 4-9 and col. 5, lines 27-35). Regarding claim 19, an apparatus having a first metal layer (16) located on a substrate (12); a first nitride layer (23) located directly over the first metal layer (16); a silicon layer

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(22) located directly over the first nitride layer (23); a second nitride layer (25) located directly over the silicon layer (22); and a second metal layer (20) located directly over the second nitride layer (25), wherein the apparatus comprises a silicon capacitor to store charge in an integrated circuit (see, col. 3, lines 5-9 where it discloses that this device is used in the environment of an integrated circuit of an field insulator or active device layer of an integrated circuit wafer). Regarding claim 20, wherein the first nitride layer (23) and the second nitride layer (25) comprise silicon nitride (col. 3, line 27). Regarding claim 23, wherein the integrated circuit comprising a mixed signal device (see, col. 4, lines 1-7). Regarding claim 24, wherein the silicon layer (22) comprises amorphous silicon, (col. 5, line 60). Regarding claim 25, wherein the integrated circuit comprises a wireless multi-mode communication device (see, col. 5, lines 4-9 and col. 5, lines 27-35).

***Allowable Subject Matter***

3. Claims 1, 2, 4, and 6 are allowed.
4. Claims 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Citation of Pertinent Prior Art***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references an apparatus having silicon nitride layers being sandwiched between a silicon layer in the environment of an integrated circuit.

US 2004/0224445

Schmidt

4,996,081

Ellul et al.

4,510,516

Bartelink

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Dinkins whose telephone number is (571) 272-1972. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext. 31. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anthony Dinkins  
Primary Examiner  
Art Unit 2831

AD



ANTHONY DINKINS  
PRIMARY EXAMINER